



Analysing the employment impact of public investment and sectoral policies

The DySAM methodology

The Employment-Intensive Investment Programme (EIIP) of the ILO has great experience in evaluating and estimating the impact of public investment, mainly on infrastructure, employment and local development at the macro and micro level. A number of tools like input/output models and comparative studies have been employed.

More recently, ILO decided to develop a new diagnostic tool, which will be able to do analysis at macro, meso and micro level, but also analyse the interrelationships between these levels. While driven by the need for employment impact analyses, it also includes the social dimension, sectoral analysis in general and environmental concerns (e.g. green jobs). A dynamic framework replaces the static framework, including future technology choices.

A Dynamic Social Accounting Matrix (DySAM) with employment satellite account and technology choices was considered by EIIP to be the most appropriate instrument. Major advantages of the DySAM methodology are:

- Government, Social Partners and development partners gain a better understanding of the socio-economic structure and dynamics of the country's economy;
- The DySAM and its multiplier framework (forward and backward linkages; direct, indirect, induced employment effect), a detailed employment satellite account (gender, age groups, qualification, etc.), and disaggregated household data (by deciles) allow a more accurate analysis of the impact of public policies;
- Decision-makers and their partners can more effectively analyse and reorient their policies and programmes for enhanced employment impact, promoting local development and better targeting of groups of workers, households and enterprises.

Background and description

Since the mid-seventies, the SAM framework and model, which reflects the socio-economic structure of a country, have played a role in the development of methodologies capable of dealing with growth and distribution issues. In certain cases, computable general equilibrium (CGE) models were developed using the SAM as a consistency framework to calibrate those models. Even though a CGE may be considered appropriate for the analysis of some issues such as trade, the high number of assumptions bears a risk of being too dependent on them leading to biased results. Therefore, a SAM accounting model has been further developed to include behaviours, as well as employment details within an employment satellite account with the aim of capturing the labour market structure of a given country more effectively.

The DySAM is dynamic and, therefore, considers changes over time, but also provides some distinction on technology choices (on infrastructure). The structure of the past does not necessarily reflect the future – indeed a major point in the analyses is to simulate different methods to sector delivery. One may want to use advanced labour-based as an alternative to capital-based method for construction, for example, without compromising on quality. Or promote activities that are highly labour-intensive by nature such as social services.

The underlying SAM methodology provides the user with a consistent, transparent and easy-to-understand analysis of the workings of the economy. This conceptual framework includes potential policy means and instruments. These can be controlled to move the system in the directions of growth and equity that are consistent with the preferences of the policymakers. Therefore, it enables policy

makers to select certain activities and households for demand-driven intervention with the twin or single goals of achieving higher growth, employment and/or greater equity.

As far as the degree of dis-aggregation is concerned, the SAM framework is flexible in allowing, in principle, any level of dis-aggregation. Given that the SAM framework encompasses all major stages of the economic process, it has great potential seen from an analytical point of view. In comparison to other economic data systems such as national accounts and input-output tables, it covers macro, meso and micro levels, and their interactions as well as the economic and social side of the economy.

The DySAM multiplier analysis builds a greater understanding of the dynamic-interdependent linkages (forward, backward) between the different sectors and the institutional agents at work within the economy.

Main expected advantages

A DySAM tool allows evaluation analysis of the impact of policy decisions or situations (e.g. economic crisis) and also the simulation of future policy options thus providing useful policy advice. It covers public investment in the form of productive investment, as well as social spending and can also be applied to the overall national budgeting process.

In addition, it allows the analysis of any economic sector and its current and future - direct, indirect, induced - employment effect on specific target groups (e.g. youth, women, unqualified rural workers). It enables the analysis of the internal and external sector (including trade, FDI and capital flows) thus influencing sectoral, industrial, trade and FDI policies. Furthermore, macro issues such as the fiscal space for public spending can be analyzed with this tool.

The major **advantages** of the DySAM tool can be summarized as follows:

- It shows the interactions between different levels (macro, meso and micro); it can be used separately at each level – the relationship and interdependences and interactions of these levels can also be analyzed.
- DySAM includes an employment account with details on the labour market (including up-dates through LFS), also by target groups thus helping to improve the targeting of public policies (e.g. households, workers, enterprises), as well as multiplier effects (forward, backward linkages; direct, indirect, induced effects).
- It includes technology choice (use of labour/capital).
- It takes into consideration all social and economic interactions/complete socio-economic circle.
- DySAM has a modular approach which allows a fast and easy integration of additional information (e.g. environmental satellite account on CO² emissions) and thus a wide range of applications by a variety of decision-makers.
- It provides not only ex-post impact assessments but also forward-looking simulations of future scenarios.
- As it is a tool that can be used by a large group of actors – it is transparent, not too complex and easy to understand, it is appropriate for inter-ministerial discussions and social dialogue on future policy directions.

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